PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : B42D 5/00

A1

(11) International Publication Number: WO 97/28008

(43) International Publicati n Date: 7 August 1997 (07.08.97)

(21) International Application Number: PCT/EP96/02683

(22) International Filing Date: 20 June 1996 (20.06.96)

(30) Priority Data:
MI96A000182 2 February 1996 (02.02.96) IT

(71) Applicant *(for all designated States except US)*: LEDIBERG S.P.A. [IT/IT]; Via Dante Alighieri, 12, I-24060 San Paolo d'Argon (IT).

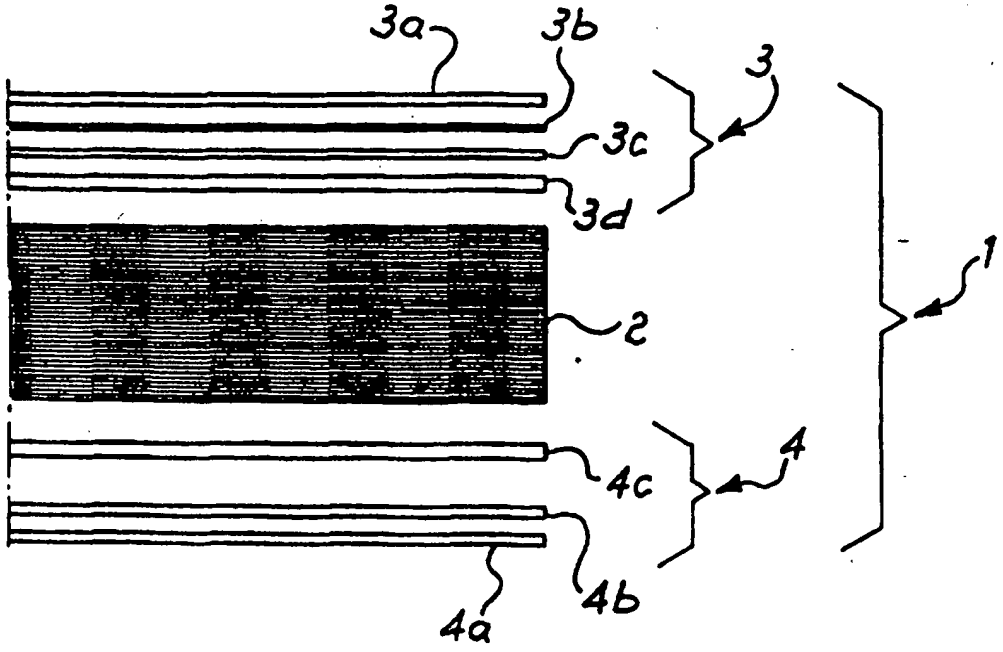
(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: LUINI, Franco [IT/IT]; Via Castel Morrone, 22, I-20129 Milano (IT). LURANI, Nicolò [IT/IT]; Via Cappuccio, 18, I-20123 Milano (IT).

(74) Agent: MARIETTI, Giuseppe; Marietti E Gislon S.r.l., Via Larga, 16, I-20122 Milano (IT).

(81) Designated States: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).

Published
With international search report.

(54) Title: BOUND PAPER ELEMENT WITH FUNCTIONAL SURFACES



(57) Abstract

A notebook or similar paper element comprises a plurality of bound pages (2), a first page (3) provided with a limited-friction surface, with the function of supporting and serving as a computer "mouse" pad, and a second page (4) prepared with a non-slip surface (4a) located on an extremity of the plurality of pages; the first page being arranged with cited controlled-friction surface opposite t the non-slip surface of the second page.

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AM	Armenia	GB	United Kingdom	MW	Malawi
AT	Austria	GE	Georgia	MX	Mexico
AU	Australia	GN	Guinea	NE	Niger
BB	Barbados	GR	Greece	NL	Netherlands
BE	Belgium	HU	Hungary	NO	Norway
BF	Burkina Faso	IE	Ireland	NZ	New Zealand
BG	Bulgaria	IT	Italy	PL	Poland
BJ	Benin	JP	Japan	PT	Portugal
BR	Brazil	KE	Kenya	RO	Romania
BY	Belarus	KG	Kyrgystan	RU	Russian Federation
CA	Canada	KP	Democratic People's Republic of Korea	SD	Sudan
CF	Central African Republic			SE	Sweden
CG	Congo	KR	Republic of Korea	SG	Singapore
CH	Switzerland	KZ	Kazakhstan	SI	Slovenia
CI	Côte d'Ivoire	LI	Liechtenstein	SK	Slovakia
CM	Cameroon	LK	Sri Lanka	SN	Senegal
CN	China	LR	Liberia	SZ	Swaziland
CS	Czechoslovakia	LT	Lithuania	TD	Chad
CZ	Czech Republic	LU	Luxembourg	TG	Togo
DE	Germany	LV	Latvia	TJ	Tajikistan
DK	Denmark	MC	Monaco	TT	Trinidad and Tobago
EE	Estonia	MD	Republic of Moldova	UA	Ukraine
ES	Spain	MG	Madagascar	UG	Uganda
FI	Finland	ML	Mali	US	United States of America
FR	France	MN	Mongolia	UZ	Uzbekistan

"BOUND PAPER ELEMENT WITH FUNCTIONAL SURFACES"

Technical field

The present invention relates to a bound paper element, such as a notebook, index book, book or manual, note-block or similar.

Background art

Such paper elements as the above (which for brevity will hereafter be referred to by the term "notebook") are well known and in common and frequent use, and for such reasons are constantly found on desks and worktops in offices and workshops. These worktops are occupied, not only with paperwork and other objects of work, but also by many other devices: computers, printers and similar machines.

Disclosure of the invention

The purpose of the present invention is to modify such elements, or notebooks, to adapt them for an additional use, in order to reduce the space occupied on the worktops.

Such purpose is achieved by means of the present invention, which relates to a paper element comprising a plurality of bound pages characterized by comprising a first page provided with a controlled-friction surface and a second page provided with a material with a non-slip surface, said second page being arranged at one extremity of said plurality of pages and said first page with cited

controlled-friction surface being arranged opposite to the non-slip surface of the said second page.

By the term "controlled-friction surface" is meant here a fit surface to support a "mouse" for computer and to permit controlled and precise movements. Surfaces of this type are produced in embossed plastic (e.g. PVC, PP or PE), particularly with cusp-embossing.

According to a preferential embodiment of the invention, the first and the second page are arranged on opposite sides of the plurality of bound pages.

According to another aspect of the invention, the first and the second page are joined internally by at least one layer of material with such a coefficient of friction to maintain them substantially fixed with respect to the underlying pages.

According to a further aspect of the invention, the angles of the notebook are rounded.

Best mode for carrying out the invention

The invention will now be described in more detail with reference to the enclosed drawings which are illustrative and not limiting, and in which:

- fig. 1 is a schematic partial view and in exploded section of a preferential embodiment of the present invention;
- fig. 2 is a perspective schematic view of the embodiment

shown in fig. 1; and

- figures 3 and 4 are perspective views of a further embodiment according to the invention.

As can be seen in these figures, the notebook 1 (or other bound paper element) according to the present invention presents a plurality of pages 2, of paper, which constitute the functional part to its use as notebook or index book or manual of instructions, etc.

The notebook 1 comprises a first page 3 provided with a controlled-friction surface, i.e. a fit surface to act as support for a computer "mouse" and a second page 4 provided with a material with a non-slip surface whose function is to prevent the movement of the notebook 1 with respect to the plane of support. The first page 3 and the second page 4 correspond therefore to the cover pages of the notebook 1 and are arranged at opposite extremities of the central pages 2.

The first page 3 generally comprises a layer 3a in an embossed, plastic material e.g. PVC, PP (polypropylene) or PE (polyethylene) or analogous material that furnishes the cited controlled-friction surface. The embossing has the function of improving the precision in the control of the movements of the "mouse" and is preferentially of the cusp type. To improve the aesthetic appearance of the first page 3, the layer 3a is preferably in transparent

material and is provided internally with a printed layer 3b and of a screen-printed base layer 3c.

The second page 4 comprises a layer 4a in thermoplastic material, generally expanded, with non-slip function. Materials suited to this use are the thermoplastic rubbers (preferably SBR) or analogous polymers, such as for instance those known as EDM and EPDM. The layer 4a is generally joined with a layer 4b in similar PVC material or, if necessary, embossed in the above way suitable for the first page 3.

In the preferential embodiment shown, the first and the second page are joined internally with a layer of material, 3d and 4c respectively, with a coefficient of such friction to maintain them substantially fixed with respect to the pages 2 (underlying page 3 and overlying the page 4). The material of the layers 3d and 4c are preferably rigid or joined in turn with a layer of rigid material. Materials proper are card and cardboard, thermoplastic resins and rubbers, if necessary applied as film on a rigid support.

In an alternative embodiment of the present invention, wherever the number of pages 2 is very high and the notebook 1 is very tall, the first page 3, with its controlled-friction surface, is placed in an intermediate position inside the plurality of pages 2. Therefore,

opening the notebook 1 in correspondence of page 3, the "mouse" can be used on the embossed layer 3a. In this embodiment, page 3 can be provided with the layer 3d to mantain it substantially fixed with respect to the underlying pages 2.

The binding of the notebook 1 could be of any known type, for instance of the spiral or wi-reo type, of the open rigid type, of the paper covered type or of the so-called book or ribbon type, and will be such as to limit the possible movements between the pages of the notebook 1 under the pressures caused by the movements of the "mouse" on the first page 3.

With the same object of reducing to a minimum the possible relative movements of the pages of the notebook, one or more of the angles of the first and/or of the second page, and if necessary also the angles of all the pages of the notebook, are rounded. Generally there will be two rounded angles (opposite the binding) on the first and on the second page.

The fig.3 shows a variation of the embodiment according to the figures 1 and 2, in which the second page 4 is provided with an extension 5 which can fold back onto page 4 when not in use. The extension 5 presents a lower layer 5b in similar non-slip material to that of the layer 4a of the page 4, as well as an upper layer 5a in similar

controlled-friction material to that of the layer 3a of the page 3. The extension 5 can therefore be used for the movements of the "mouse" in addition or in alternative to the page 3. Fig. 4 shows a disposition of notebook also using the extension 5.

The production of the notebook according to the invention happens in the following way: the decorative layer 3b is at first applied by printing to the inside side of the layer 3a and then the base layer 3c is screen-printed. Alternatively, the printing could be effected on the external side of layer 3a. Page 4 is produced by joining layer 4a with the layer 4b. The pages thus obtained are then preferably joined with the layers 3d and 4c, respectively.

CLAIMS

1. A paper element (1) comprising a plurality of bound pages (2), characterized by comprising a first page (3) provided with a controlled-friction surface (3a) and a second page (4) provided with a material with a non-slip surface (4a); said second page (4) being arranged at one extremity of said plurality of pages (2) and said first page (3) with cited controlled-friction surface (3a) being arranged opposite to the non-slip surface (4a) of the said second page (4).

2. A paper element according to claim 1, wherein said first (3) and second (4) pages are arranged at opposite extremities of the said plurality of pages (2).

3. A paper element according to claim 1 or 2, wherein said first (3) and/or said second page (4) are joined internally by at least one layer (3d, 4c) of material with such a coefficient of friction as to maintain them substantially fixed with respect to the underlying pages (2).

4. A paper element according to any of the claims from 1 to 3, wherein is present a book or ribbon binding.

5. A paper element according to any of the claims from 1 to 4, wherein said first page (3) is constituted by or comprises a layer (3a) in an embossed plastic material and said second page (4) is constituted by or comprises a

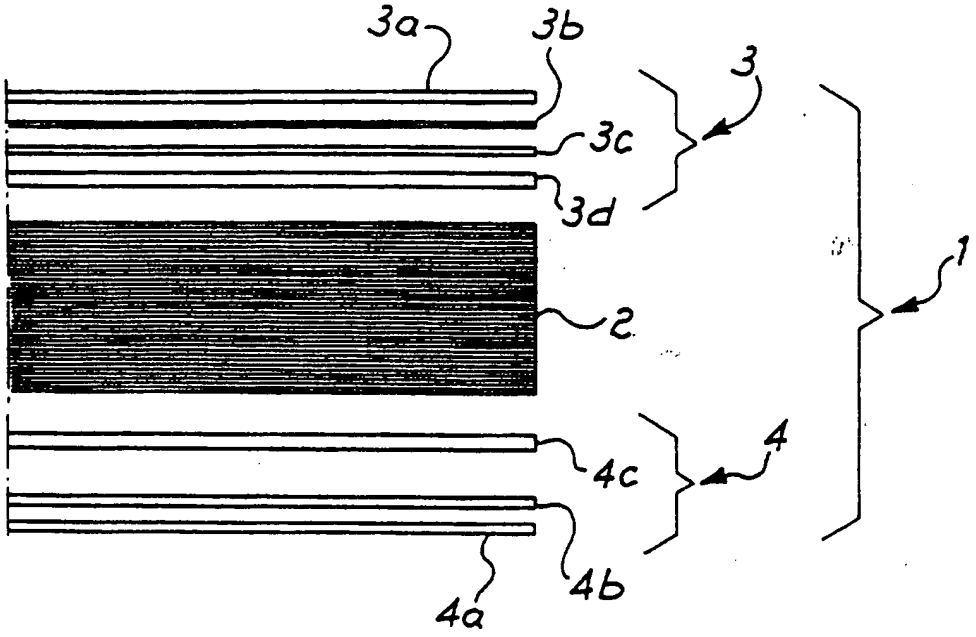
layer (4a) in expanded thermoplastic material.

6. A paper element according to any of the claims from 3 to 5, comprising an internal layer (3d, 4c) selected from cardboard, resins and thermoplastic rubbers.

7. A paper element according to claim 1 and to any of the claims from 3 to 6, wherein said second page (4) is provided with a sideways-folding extension (5).

8. A paper element according to any of the preceding claims, wherein one or more of the angles of at least the said first (3) and/or second page (4) are rounded.

Fig.1



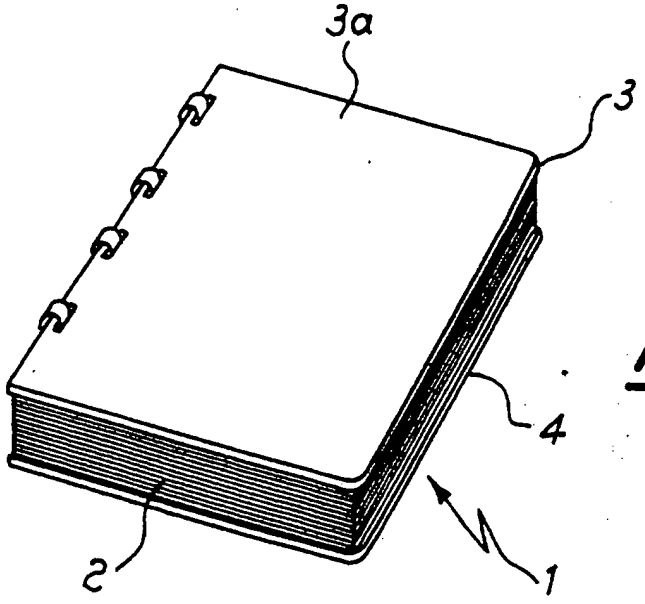


Fig.2

Fig.3

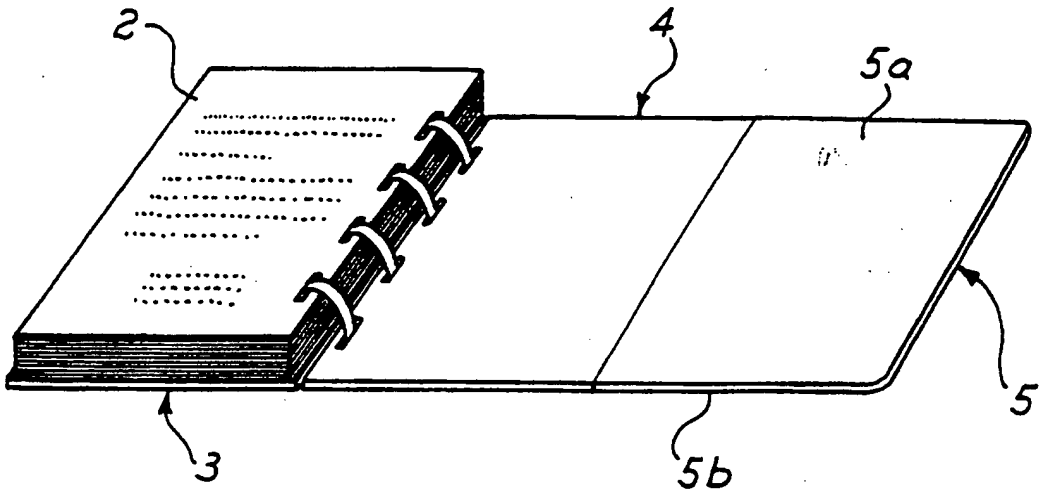
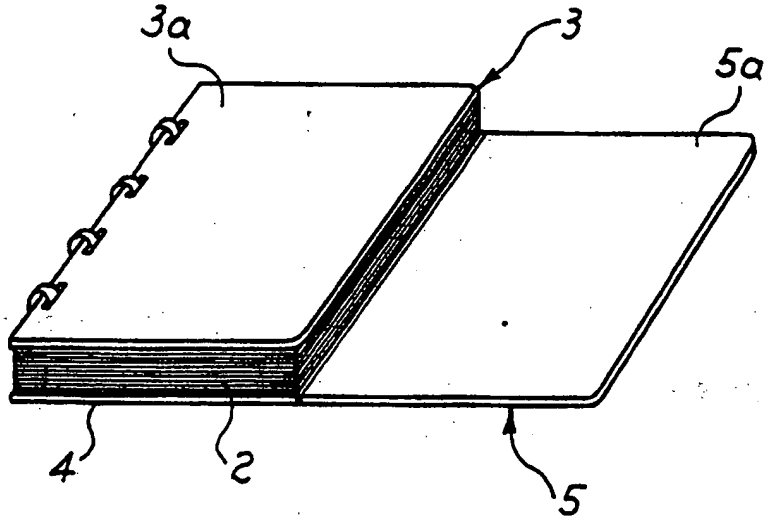


Fig.4



INTERNATIONAL SEARCH REPORT

Inv onal Application No
PCT/EP 96/02683

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 B42D5/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 B42D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US,A,5 405 168 (G.GARY HOLT) 11 April 1995 see the whole document ---	1-4,8
X	FR,A,2 685 112 (CARAT) 18 June 1993 see the whole document ---	1-5
X	GB,A,2 289 520 (MICHAEL JAMES HIGGS) 22 November 1995 see the whole document -----	1,4

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
23 October 1996	12.11.96

Name and mailing address of the ISA	Authorized officer
European Patent ffice, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk	

INTERNATIONAL SEARCH REPORT

Information on patent family members

Int ional Application No
PCT/EP 96/02683

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US-A-5405168	11-04-95	NONE	
FR-A-2685112	18-06-93	NONE	
GB-A-2289520	22-11-95	NONE	